No. of Printed Pages : 4

BIEL-034

DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI)

Term-End Examination

00033

December, 2016

BIEL-034 : AUDIO AND VIDEO ENGINEERING

Time : 2 hours *Maximum Marks : 70*

***Note** : Attempt any **five** questions. Question no. **1** is **compulsory**. All questions carry equal marks.*

1. Select the best alternative : *7×2=14*

(a) Which of the following quantities are transferred during wave propagation ?

(i) Speed

(ii) Mass

(iii) Matter

(iv) Energy

(b) SI unit of time-period is

(i) second

(ii) hour

(iii) minute

(iv) nanosecond

(c) The speed of sound in a medium depends upon

(i) amplitude

(ii) frequency

(iii) wavelength

(iv) properties of the medium

(d) Sound waves do ***not*** travel through

(i) Solids

(ii) Liquids

(iii) Gases

(iv) Vacuum

(e) The minimum distance between source and reflector, so that an echo is heard, is approximately equal to

(i) 10 m

(ii) 17 m

(iii) 34 m

(iv) 50 m

(f) Bats detect the obstacles in their path by receiving the reflected

(i) Infrasonic waves

(ii) Radio waves

(iii) EM waves

(iv) Ultrasonic waves

(g) The persistence of audible sound due to successive reflections from the surrounding objects even after the source has stopped to produce that sound is called

(i) Reflection

(ii) Echo

(iii) Reverberation

(iv) Rarefaction

2. (a) Give the comparison between the following types of speakers :

(i) Woofer

(ii) Mid-range

(iii) Tweeter

(b) Explain the functioning of CD pick-up assembly. *14*

3. Explain the working of a CD player with the help of a neatly labelled block diagram. *14*

4. What is Grassman's law ? Differentiate between additive and subtractive colour mixing. Explain composite video signal with neatly labelled waveforms. *14*

5. (a) Explain the concept of audio and video signal transmission using positive and negative modulation. *10*

(b) Give the advantages and disadvantages of negative modulation. *4*

6. With the help of neatly labelled block diagram, explain the following : $2 \times 7 = 14$

(a) Operation of colour TV receiver

(b) PAL-D decoder

7. Write short notes on any ***four*** of the following : $4 \times 3\frac{1}{2} = 14$

(a) Vestigial Sideband Transmission

(b) Crossover Network Circuit

(c) CD Pick-up Assembly

(d) RGB Drive Amplifiers

(e) Connectors (2-ways and 3-ways)

(f) ACC Amplifier

(g) Delta Gun Picture Tube